UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

NOV 14 2013

REPLY TO THE ATTENTION OF:

WN-16J

Paul Novak, Manager
Surface Water Division
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

Re: Proposed NPDES Permit, American Energy Corporation/Century Mine (Bennoc Refuse Disposal Area), Alledonia, Ohio, Permit No. OIL00159*AD, Application No. OH0144576

Dear Mr. Novak:

After the federal government shutdown from October 1 – October 16, 2013, the U.S. Environmental Protection Agency received OEPA's Proposed National Pollutant Discharge Elimination System Permit (Permit); cover letter dated October 8, 2013 and associated permit documentation, for the American Energy Corporation's Bennoc Refuse Disposal Area OH0144576. EPA has under separate letter to Scott Nally, Director of OEPA, submitted its general objection to the proposed permit. This letter is EPA's response to several statements made within OEPA's October 8, 2013, cover letter which referenced some of the associated documentation that accompanied the proposed permit. OEPA's cover letter was replying to EPA's September 24, 2013 letter that, in part, requested OEPA to provide a written explanation as to why it believes that the permit is consistent with the water quality based requirements of the CWA and EPA's implementing regulations.

Nature of discharge

EPA understands the discharges proposed to be covered by the permit would be characterized as runoff from a coarse refuse disposal area that is currently a reclaimed surface coal mine. The outfalls are located at the outlets of ponds situated to collect runoff from the (current) reclaimed area and the (future) coarse refuse disposal area. The company does not propose any modifications or upgrades to the two ponds, and has only a requirement in the permit to upgrade the flow monitoring abilities at the two outfalls.

OEPA stated that the proposed permit is consistent with water quality based requirements of the Clean Water Act (CWA) and EPA's implementing regulations for several reasons.

1. OEPA asserts that the site discharges are primarily ***precipitation-induced.***
   - That there would be ***dilution*** in the receiving waters when the outfalls discharge
   - There would ***not be a discharge during critical (low-flow) conditions***
2. Implementation of ***best management practices*** would minimize the discharge of pollutants
3. ***OEPA's understanding that USEPA Region 3 has been approving permits for precipitation-induced discharges in West Virginia without requiring numeric water quality based effluent limits for TDS-related parameters.***
4. OEPA states that the permit required biological and chemical monitoring are sufficient to demonstrate compliance with WQS.

With this letter, we would like to respond to your assertions, point by point.

1. Precipitation induced discharges

OEPA's permit documentation lacked any existing flow discharge data for these ponds. Yet, contrary to OEPA's assertion, the permit application did include the company's verification that the discharge would not be intermittent; see EPA Form 2D NPDES, page 2, III. Flows, Sources of Pollution and Treatment Technologies, Section C. The company checked "no" to the question of whether the discharges would be intermittent. The company also marked on the application average daily and maximum daily flow rates that it expects to discharge from these outfalls. These flows are significantly higher than what was reported in DMR data for the existing outfalls[1]. Data show that the existing discharges occur frequently and in the absence of a precipitation event. The company proposes no improvements to the ponds. Therefore, it is reasonable to conclude that not only would the ponds discharge at least as frequently as they do now, but they are likely to discharge more frequently than they do now.

Additionally, based on AEC's data submitted in response to EPA's February 14, 2011, information request (issued pursuant to Section 308 of the CWA), it appears that Pond 001, proposed Pond 023 for this permit, discharges over 90% of the time. The DMR data also indicate that 81% of days when a discharge was reported were during dry weather when there was no precipitation. Therefore, the data do not support OEPA's assertion that these are precipitation induced discharges which will not occur during low flow conditions. The DMR data submitted were from November 2009 through December 2010. See Enclosure A for a table showing the data that was submitted in response to EPA's information request. The majority of AEC DMRs for Pond 002, proposed Pond 024, during the same timeframe are blank except for a signature, so it is difficult to assess the nature of discharge without discharge data.

[1] Predicted flow rates: Outfall 023: 0.040 and 1.3 million gallons per day; Outfall 024: 0.025 and 1.01 million gallons per day, average and max daily, respectively) and existing flows based on DMR data are (Outfall 001: 0.003 and 0.010 million gallons per day; and at Outfall 002 the company only managed to report one result at 0.0015 million gallons per day

In addition, there should have been more information available for outfall 001/023 but many of those DMRs were also submitted to OEPA blank other than the signature line. We note that a blank DMR does not mean that the ponds were not discharging, as OEPA requires a code ("ac") be entered into the DMR forms if the company observes a no discharge condition. We further note that the company used that code on a few occasions when it observed a no discharge condition.

Ohio DNR has a policy/procedure directive on the subject of Sediment Pond Design, (Engineering 96-1). This document indicates that a properly designed pond would have a dewatering device and that such device would work to allow water to exit the pond so that capacity is available for the next storm event. The document indicates that ODNR expects that ponds would be dewatered 2 to 7 days following a storm event. We note that based on the DMR data, discharges occurred even when precipitation was reported as 0 inches for seven consecutive days prior to the date of the measurement, including the day the measurement was taken. In addition, we note that for almost half of the attempted flow measurement events (45%), there had been less than 0.1 inch of total precipitation in the previous 4 days leading up to the date of measurement (including the date of measurement).

OEPA states it "believes that there is not a reasonable potential to violate water quality standards (WQS) from precipitation-induced discharges if the ***best management practices*** included in the permit are complied with."

Before we specifically address the BMP issues, EPA would like to clarify, regarding OEPA's above statement, that even if the discharges were intermittent, that does not release the permitting agency from conducting a reasonable potential analysis (RPA). Intermittent discharges have the potential to cause acute and chronic impacts to aquatic life, depending on flow volume, duration, concentration of pollutants and other factors.

2. Implementation of best management practices would minimize the discharge of pollutants

AEC submitted projected effluent quality data, based on data from an existing pond (Pond 013) which is used to receive coarse coal waste pile runoff, which is the type of runoff proposed for this permit. AEC predicted that the effluent concentration of TDS would be 3138 mg/L.[2] The OEPA's numeric water standard for TDS is 1500mg/L. Data submitted by AEC in response to EPA's February 14, 2011, information request included higher concentrations of TDS for Pond

[2] The AEC's September 14, 2012 consultant report submitted to OEPA, titled "Hydro-Chemical Analysis of Waste Water Discharge and Antidegradation Assessment: American Energy Corporation's Bennoc Coarse Coal Refuse Area Ponds 001 and 002", page 5, Table 3. Expected Effluent Discharge Chemistry from Ponds 001 and 002 to Piney Creek include expected effluent concentrations of TDS at 3138 mg/L and sulfate at 2438 mg/l.

013, sample #AEC 02854, at 6860mg/L. Also included in AEC's same response, was data for Pond 001(proposed Pond 023), sample #AEC 02848, at 4780mg/L TDS. (See enclosures)

See Enclosure B for a detailed comparison of the BMP's included in the Bennoc permit with ODNR's existing BMP requirements. The requirements in this permit do not include any that are in addition to what ODNR already requires. In fact, ODNR requires far more than what this permit would require in terms of management practices. Therefore, if the outfalls that the company used to calculate the projected TDS concentration (3183 mg/L) in the discharge are in compliance with ODNR regulations, there is no basis to conclude that the presence of the same, but less robust requirements in the NPDES permit would result in lower TDS concentrations being discharged.

3. OEPA's understanding that USEPA Region 3 has been approving permits for precipitation-induced discharges in West Virginia without requiring numeric water quality based effluent limits for TDS-related parameters.

It is important to note that WVDEP's coal permits implement West Virginia's numeric water quality standards by including WQBELs where reasonable potential exists; even when the state has made a determination that the discharge is intermittent. Further, when WVDEP is considering requirements to implement its narrative criteria, it requires the permittee demonstrate the nature of the discharge through site specific flow data, DMRs, and precipitation data.

Ohio has a numeric standard for total dissolved solids. Best management practices are not a substitute for WQBELs where there is the reasonable potential to exceed a numeric water quality standard. It is unclear why OEPA would provide a guidance document from West Virginia for the implementation of a narrative standard as justification for not implementing its own numeric water quality standards in this Ohio permit. That said we do have some comments on the West Virginia documents and the permit records that were included in the October 8 letter.

The West Virginia guidance documents recommend that several permit conditions be included in permits if a numeric conductivity limit is not included. It seems that OEPA chose 2 out of 6 of these recommended conditions and is asserting that what was drafted would rise to the level of what would be included in a WVDEP drafted permit which Region 3 would not object to. Most notably absent from the Bennoc permit are:

- Whole Effluent Toxicity limits
- (Sufficient) chemical monitoring
- (Sufficient) in-stream biological monitoring
- Aquatic Ecosystem Protection Plan
- Adaptive Management Plan

We direct your attention to the table on Page 7 of the August guidance ("Justification and Background for Permitting Guidance for Surface Coal Mining Operations to Protect West Virginia's Narrative Water Quality Standards", 47 C.S.R. 2 §§ 3.2.e and 3.2.i). This table presents WVDEP's stressor identification protocols, as used in their EPA-approved TMDL process. Conductivity greater than 1533 umhos/cm and sulfate greater than 417 mg/L are identified as concentrations used to identify whether or not ionic strength is a "definite stressor." In the case of the Bennoc permit, the water quality standards being contemplated are 1500 mg/L TDS (relating to approximately 2400 umhos/cm) and OEPA's original draft limits are more than 2,000 mg/L sulfate.

4. Biological and Chemical Monitoring

Biological Monitoring

OEPA states that the permit requirements for biological and chemical monitoring are sufficient to demonstrate compliance with WQS. Biological Assessment requirements can be found in Section N on page 18 of the permit. Biological sampling is required "once during coarse coal refuse disposal operations and once not later than 3 years following reclamation." This biological assessment is not adequately defined in the permit, since Section N. 2. Study Plan requires that 6 months from the effective date of the permit, a plan be submitted. It is difficult to ascertain how OEPA can determine that a plan it has not yet received and so has not reviewed is sufficient to demonstrate compliance with water quality.

Further, the frequency of biological monitoring is not sufficient for any decline in biota to be observed in a timely manner so that adaptive management strategies (as specified in the WVDEP guidance document) could be implemented that would reduce the impact of the discharges to the streams. Additionally, EPA notes the lack of a trigger for implementing adaptive management, and the absence of any description or requirement that the company develop an adaptive management plan.

Chemical Monitoring

Within the 2nd paragraph of page 2 of OEPA's cover letter, OEPA again utilized its assertion that since the discharges are intermittent, monitoring frequencies should be reduced from twice a week to once a month for pH, TSS, chloride, sulfate, selenium, iron and manganese. Per 40 C.F.R. §122.44(i), the type, frequency and location of monitoring at each discharge location must be adequate to assure compliance with each effluent limitation, including narrative limits. EPA has established, based on data submitted within this letter, that these discharges do not appear to be intermittent and so reducing the monitoring frequency is not supported. OEPA in all of its other coal permits requires, at a minimum, twice monthly monitoring of chemical constituents.

There is no specific justification supplied by OEPA nor the permittee to support less frequent monitoring than what would be required of all other coal sector permittees in the state of Ohio.

Conclusions:

- OEPA's assertion that the pond discharges could be characterized as intermittent, precipitation-induced, and not occurring during critical low-flow conditions is not supported by the permit application or DMR data.
- OEPA's argument that BMP's included in this permit would reduce the discharge of TDS and related parameters is not supported by existing data and the BMP's included in the permit are even less stringent than what is already required by ODNR.
- OEPA's argument that it is doing what has been approved in West Virginia for coal mining permits is: a) not relevant as the Bennoc situation differs from the examples provided by OEPA in support of this assertion; and b) not supported by the permit language as the Bennoc permit does not include the permit conditions described in the WVDEP guidance document.
- OEPA's arguments for reduction in monitoring frequency are not supported; due to the actual nature of the flow, inadequate permit language and OEPA's standard monitoring frequency used in coal sector permits statewide.

We trust that this letter has clarified some of the issues raised in OEPA's October 8, 2013 cover letter. If you have any questions related to EPA's review, please contact Patrick Kuefler or Janet Pellegrini of my staff. Mr. Kuefler can be reached at (312) 353-6268 or by email at kuefler.patrick@epa.gov. Janet Pellegrini can be reached at (312) 886-4298, or by email at pellegrini.janet@epa.gov.

Sincerely,

Kevin M. Pierard, Chief
NPDES Program Branch

Enclosures

cc: Daniel Gill, Ohio EPA

Enclosure A: DMR data for flow and precipitation.

Date	Outfall 001/023 flow (gpm)	Outfall 001/023 precip (in)	Outfall 002/024 flow (gpm)	Outfall 002/024 precip (in)
11/1/2009	blank	blank	blank	blank
11/2/2009	blank	blank	blank	blank
11/3/2009	blank	blank	blank	blank
11/4/2009	blank	blank	blank	blank
11/5/2009	blank	blank	blank	blank
11/6/2009	blank	blank	blank	blank
11/7/2009	blank	blank	blank	blank
11/8/2009	blank	blank	blank	blank
11/9/2009	blank	blank	blank	blank
11/10/2009	blank	blank	blank	blank
11/11/2009	blank	blank	blank	blank
11/12/2009	blank	blank	blank	blank
11/13/2009	blank	blank	blank	blank
11/14/2009	blank	blank	blank	blank
11/15/2009	blank	blank	blank	blank
11/16/2009	blank	blank	blank	blank
11/17/2009	blank	blank	blank	blank
11/18/2009	blank	blank	blank	blank
11/19/2009	blank	blank	blank	blank
11/20/2009	blank	blank	blank	blank
11/21/2009	blank	blank	blank	blank
11/22/2009	blank	blank	blank	blank
11/23/2009	blank	blank	blank	blank
11/24/2009	blank	blank	blank	blank
11/25/2009	blank	blank	blank	blank
11/26/2009	blank	blank	blank	blank
11/27/2009	blank	blank	blank	blank
11/28/2009	blank	blank	blank	blank
11/29/2009	blank	blank	blank	blank
11/30/2009	blank	blank	blank	blank
12/1/2009		0	blank	blank
12/2/2009		0	blank	blank
12/3/2009	1500	0	blank	blank
12/4/2009		0	blank	blank
12/5/2009		0	blank	blank
12/6/2009		0.05	blank	blank
12/7/2009		0	blank	blank
12/8/2009		1.39	blank	blank
12/9/2009		0	blank	blank
12/10/2009	3800	0	blank	blank
12/11/2009		0	blank	blank
12/12/2009		0	blank	blank

Date	Outfall 001/023 flow (gpm)	Outfall 001/023 precip (in)	Outfall 002/024 flow (gpm)	Outfall 002/024 precip (in)
12/13/2009		0.43	blank	blank
12/14/2009		0	blank	blank
12/15/2009		0	blank	blank
12/16/2009		0	blank	blank
12/17/2009	800	0	blank	blank
12/18/2009		0	blank	blank
12/19/2009		0	blank	blank
12/20/2009		0.5	blank	blank
12/21/2009		0	blank	blank
12/22/2009		0	blank	blank
12/23/2009		0	blank	blank
12/24/2009	1	0.32	blank	blank
12/25/2009		0.33	blank	blank
12/26/2009		0	blank	blank
12/27/2009		0.02	blank	blank
12/28/2009		0	blank	blank
12/29/2009		0	blank	blank
12/30/2009		0.16	blank	blank
12/31/2009		0	blank	blank
1/1/2010		0.01	blank	blank
1/2/2010		0.01	blank	blank
1/3/2010		0.02	blank	blank
1/4/2010		0.11	blank	blank
1/5/2010		0	blank	blank
1/6/2010		0	blank	blank
1/7/2010	900	0.17	blank	blank
1/8/2010		0	blank	blank
1/9/2010		0	blank	blank
1/10/2010		0	blank	blank
1/11/2010		0	blank	blank
1/12/2010		0	blank	blank
1/13/2010		0	blank	blank
1/14/2010	1500	0	blank	blank
1/15/2010		0	blank	blank
1/16/2010		0	blank	blank
1/17/2010		0.24	blank	blank
1/18/2010		0.26	blank	blank
1/19/2010		0	blank	blank
1/20/2010		0	blank	blank
1/21/2010	10300	0	blank	blank
1/22/2010		0	blank	blank
1/23/2010		0.01	blank	blank

Enclosure A: DMR data for flow and precipitation.

Date	Outfall 001/023 flow (gpm)	Outfall 001/023 precip (in)	Outfall 002/024 flow (gpm)	Outfall 002/024 precip (in)
1/24/2010		1.45	blank	blank
1/25/2010		0.04	blank	blank
1/26/2010		0.01	blank	blank
1/27/2010		0.08	blank	blank
1/28/2010	7200	0	blank	blank
1/29/2010		0	blank	blank
1/30/2010		0	blank	blank
1/31/2010		0	blank	blank
2/1/2010		0	blank	blank
2/2/2010		0	blank	blank
2/3/2010		0	blank	blank
2/4/2010	5000	0	blank	blank
2/5/2010		0.55	blank	blank
2/6/2010		0.67	blank	blank
2/7/2010		0	blank	blank
2/8/2010		0	blank	blank
2/9/2010		0.35	blank	blank
2/10/2010		0.03	blank	blank
2/11/2010		0	blank	blank
2/12/2010	4200	0	blank	blank
2/13/2010		0	blank	blank
2/14/2010		0	blank	blank
2/15/2010		0.23	blank	blank
2/16/2010		0.07	blank	blank
2/17/2010		0	blank	blank
2/18/2010	4200	0	blank	blank
2/19/2010		0	blank	blank
2/20/2010		0	blank	blank
2/21/2010		0	blank	blank
2/22/2010		0	blank	blank
2/23/2010		0	blank	blank
2/24/2010		0.05	blank	blank
2/25/2010		0.01	blank	blank
2/26/2010	ac	0	blank	blank
2/27/2010		0	blank	blank
2/28/2010		0	blank	blank
3/1/2010		0	ac	0
3/2/2010		0		0
3/3/2010	7000	0		0
3/4/2010		0		0
3/5/2010		0		0
3/6/2010		0		0

Date	Outfall 001/023 flow (gpm)	Outfall 001/023 precip (in)	Outfall 002/024 flow (gpm)	Outfall 002/024 precip (in)
3/7/2010		0		0
3/8/2010		0		0
3/9/2010		0		0
3/10/2010		0		0
3/11/2010	5000	0	1500	0
3/12/2010		0		0
3/13/2010		0		0
3/14/2010		0.57		0.57
3/15/2010		0.01	ac	0.01
3/16/2010		0		0
3/17/2010	5000	0		0
3/18/2010		0		0
3/19/2010		0		0
3/20/2010		0		0
3/21/2010		0.33		0.33
3/22/2010		0.51	ac	0.51
3/23/2010		0.02		0.02
3/24/2010	2500	0		0
3/25/2010		0.76		0.76
3/26/2010		0		0
3/27/2010		0		0
3/28/2010		0.35		0.35
3/29/2010		0		0
3/30/2010		0		0
3/31/2010		0		0
4/1/2010	2500	0	blank	blank
4/2/2010		0	blank	blank
4/3/2010		0	blank	blank
4/4/2010		0	blank	blank
4/5/2010		0.1	blank	blank
4/6/2010	2200	0	blank	blank
4/7/2010		0	blank	blank
4/8/2010		0.22	blank	blank
4/9/2010		0	blank	blank
4/10/2010		0	blank	blank
4/11/2010		0	blank	blank
4/12/2010		0	blank	blank
4/13/2010		0	blank	blank
4/14/2010	1200	0.01	blank	blank
4/15/2010		0	blank	blank
4/16/2010		0.21	blank	blank
4/17/2010		0	blank	blank

Enclosure A: DMR data for flow and precipitation.

Date	Outfall 001/023 flow (gpm)	Outfall 001/023 precip (in)	Outfall 002/024 flow (gpm)	Outfall 002/024 precip (in)
4/18/2010		0	blank	blank
4/19/2010		0	blank	blank
4/20/2010		0	blank	blank
4/21/2010	1200	0	blank	blank
4/22/2010		0	blank	blank
4/23/2010		0.03	blank	blank
4/24/2010		0	blank	blank
4/25/2010		0.36	blank	blank
4/26/2010		0.21	blank	blank
4/27/2010	540	0	blank	blank
4/28/2010		0	blank	blank
4/29/2010		0	blank	blank
4/30/2010		0	blank	blank
5/1/2010		0.15	blank	blank
5/2/2010		1.77	blank	blank
5/3/2010		0	blank	blank
5/4/2010		0	blank	blank
5/5/2010		0.06	blank	blank
5/6/2010	2800	0	blank	blank
5/7/2010		0.04	blank	blank
5/8/2010		0	blank	blank
5/9/2010		0	blank	blank
5/10/2010		0.69	blank	blank
5/11/2010		0.15	blank	blank
5/12/2010		0	blank	blank
5/13/2010		0	blank	blank
5/14/2010	2880	0	blank	blank
5/15/2010		0	blank	blank
5/16/2010		0.22	blank	blank
5/17/2010		1.33	blank	blank
5/18/2010		0.12	blank	blank
5/19/2010		0.03	blank	blank
5/20/2010		0	blank	blank
5/21/2010	5400	0	blank	blank
5/22/2010		0.49	blank	blank
5/23/2010		0	blank	blank
5/24/2010		0	blank	blank
5/25/2010		0	blank	blank
5/26/2010		0	blank	blank
5/27/2010		0	blank	blank
5/28/2010	2500	0	blank	blank
5/29/2010		0	blank	blank
5/30/2010		0	blank	blank
5/31/2010		0.47	blank	blank
6/1/2010		0	blank	blank
6/2/2010		0.44	blank	blank
6/3/2010		0.02	blank	blank
6/4/2010	1500	0	blank	blank
6/5/2010		3	blank	blank
6/6/2010		0.63	blank	blank
6/7/2010		0	blank	blank
6/8/2010	8500	0.37	blank	blank
6/9/2010		0.37	blank	blank
6/10/2010		0.25	blank	blank
6/11/2010		0.3	blank	blank
6/12/2010		0.27	blank	blank
6/13/2010		0	blank	blank
6/14/2010		0.05	blank	blank
6/15/2010		0	blank	blank
6/16/2010		0	blank	blank
6/17/2010		0	blank	blank
6/18/2010	2800	0	blank	blank
6/19/2010		0	blank	blank
6/20/2010		0	blank	blank
6/21/2010		0.27	blank	blank
6/22/2010		0.16	blank	blank
6/23/2010		1.1	blank	blank
6/24/2010		0	blank	blank
6/25/2010	1850	0	blank	blank
6/26/2010		0	blank	blank
6/27/2010		0.12	blank	blank
6/28/2010		0.11	blank	blank
6/29/2010		0	blank	blank
6/30/2010		0	blank	blank
7/1/2010		0	blank	blank
7/2/2010	1850	0	blank	blank
7/3/2010		0	blank	blank
7/4/2010		0	blank	blank
7/5/2010		0	blank	blank
7/6/2010		0	blank	blank
7/7/2010		0	blank	blank
7/8/2010	1050	0	blank	blank
7/9/2010		1.69	blank	blank
7/10/2010		0	blank	blank

Enclosure A: DMR data for flow and precipitation.

Date	Outfall 001/023 flow (gpm)	Outfall 001/023 precip (in)	Outfall 002/024 flow (gpm)	Outfall 002/024 precip (in)
7/11/2010		0.01	blank	blank
7/12/2010		0	blank	blank
7/13/2010		0.44	blank	blank
7/14/2010		0	blank	blank
7/15/2010		0	blank	blank
7/16/2010	1100	0.27	blank	blank
7/17/2010		0.68	blank	blank
7/18/2010		0.02	blank	blank
7/19/2010		0	blank	blank
7/20/2010		0	blank	blank
7/21/2010		0	blank	blank
7/22/2010		0	blank	blank
7/23/2010	700	0	blank	blank
7/24/2010		0	blank	blank
7/25/2010		0.61	blank	blank
7/26/2010		0	blank	blank
7/27/2010		0	blank	blank
7/28/2010		0	blank	blank
7/29/2010	1500	0.46	blank	blank
7/30/2010		0	blank	blank
7/31/2010		0	blank	blank
8/1/2010		0.04	blank	blank
8/2/2010		0	blank	blank
8/3/2010		0	blank	blank
8/4/2010		0.61	blank	blank
8/5/2010		0	blank	blank
8/6/2010	1300	0	blank	blank
8/7/2010		0	blank	blank
8/8/2010		0	blank	blank
8/9/2010		0	blank	blank
8/10/2010		0.01	blank	blank
8/11/2010		0	blank	blank
8/12/2010	1000	0	blank	blank
8/13/2010		0	blank	blank
8/14/2010		0	blank	blank
8/15/2010		0	blank	blank
8/16/2010		0	blank	blank
8/17/2010		0	blank	blank
8/18/2010		0	blank	blank
8/19/2010		0	blank	blank
8/20/2010	1250	0	blank	blank
8/21/2010		0	blank	blank
8/22/2010		1.29	blank	blank
8/23/2010		0	blank	blank
8/24/2010		0	blank	blank
8/25/2010		0	blank	blank
8/26/2010		0	blank	blank
8/27/2010		0	blank	blank
8/28/2010	300	0	blank	blank
8/29/2010		0	blank	blank
8/30/2010		0	blank	blank
8/31/2010		0	blank	blank
10/1/2010	blank	blank	blank	blank
10/2/2010	blank	blank	blank	blank
10/3/2010	blank	blank	blank	blank
10/4/2010	blank	blank	blank	blank
10/5/2010	blank	blank	blank	blank
10/6/2010	blank	blank	blank	blank
10/7/2010	blank	blank	blank	blank
10/8/2010	blank	blank	blank	blank
10/9/2010	blank	blank	blank	blank
10/10/2010	blank	blank	blank	blank
10/11/2010	blank	blank	blank	blank
10/12/2010	blank	blank	blank	blank
10/13/2010	blank	blank	blank	blank
10/14/2010	blank	blank	blank	blank
10/15/2010	blank	blank	blank	blank
10/16/2010	blank	blank	blank	blank
10/17/2010	blank	blank	blank	blank
10/18/2010	blank	blank	blank	blank
10/19/2010	blank	blank	blank	blank
10/20/2010	blank	blank	blank	blank
10/21/2010	blank	blank	blank	blank
10/22/2010	blank	blank	blank	blank
10/23/2010	blank	blank	blank	blank
10/24/2010	blank	blank	blank	blank
10/25/2010	blank	blank	blank	blank
10/26/2010	blank	blank	blank	blank
10/27/2010	blank	blank	blank	blank
10/28/2010	blank	blank	blank	blank
10/29/2010	blank	blank	blank	blank
10/30/2010	blank	blank	blank	blank
10/31/2010	blank	blank	blank	blank
11/1/2010	blank	blank	blank	blank

Enclosure A: DMR data for flow and precipitation.

Date	Outfall 001/023 flow (gpm)	Outfall 001/023 precip (in)	Outfall 002/024 flow (gpm)	Outfall 002/024 precip (in)
11/2/2010	blank	blank	blank	blank
11/3/2010	blank	blank	blank	blank
11/4/2010	blank	blank	blank	blank
11/5/2010	blank	blank	blank	blank
11/6/2010	blank	blank	blank	blank
11/7/2010	blank	blank	blank	blank
11/8/2010	blank	blank	blank	blank
11/9/2010	blank	blank	blank	blank
11/10/2010	blank	blank	blank	blank
11/11/2010	blank	blank	blank	blank
11/12/2010	blank	blank	blank	blank
11/13/2010	blank	blank	blank	blank
11/14/2010	blank	blank	blank	blank
11/15/2010	blank	blank	blank	blank
11/16/2010	blank	blank	blank	blank
11/17/2010	blank	blank	blank	blank
11/18/2010	blank	blank	blank	blank
11/19/2010	blank	blank	blank	blank
11/20/2010	blank	blank	blank	blank
11/21/2010	blank	blank	blank	blank
11/22/2010	blank	blank	blank	blank
11/23/2010	blank	blank	blank	blank
11/24/2010	blank	blank	blank	blank
11/25/2010	blank	blank	blank	blank
11/26/2010	blank	blank	blank	blank
11/27/2010	blank	blank	blank	blank
11/28/2010	blank	blank	blank	blank
11/29/2010	blank	blank	blank	blank
11/30/2010	blank	blank	blank	blank
12/1/2010		0.04	blank	blank
12/2/2010		0	blank	blank
12/3/2010	ac	0	blank	blank
12/4/2010		0	blank	blank
12/5/2010		0.03	blank	blank
12/6/2010		0	blank	blank
12/7/2010		0.01	blank	blank
12/8/2010		0	blank	blank
12/9/2010		0	blank	blank
12/10/2010	ac	0	blank	blank
12/11/2010		0.1	blank	blank
12/12/2010		0.48	blank	blank
12/13/2010		0	blank	blank
12/14/2010		0	blank	blank
12/15/2010		0	blank	blank
12/16/2010	540	0.03	blank	blank
12/17/2010		0	blank	blank
12/18/2010		0	blank	blank
12/19/2010		0	blank	blank
12/20/2010		0	blank	blank
12/21/2010		0	blank	blank
12/22/2010		0	blank	blank
12/23/2010	ac	0	blank	blank
12/24/2010		0	blank	blank
12/25/2010		0	blank	blank
12/26/2010		0	blank	blank
12/27/2010		0	blank	blank
12/28/2010		0	blank	blank
12/29/2010		0	blank	blank
12/30/2010		0	blank	blank
12/31/2010		0	blank	blank

Enclosure A 2

The DMR data are summarized below.

Table 1: Summary of DMR data for outfalls 001 and 002, submitted to USEPA by AEC in response to EPA's CWA 308 information request of February 14, 2011

Total times flow was Measured	38
Total times Flow Measurement Attempted and No Flow was found	4
Total times Flow Measurement Attempted	42
% of Time flow measured when attempted	90.5%
# of Times Flow Measurement corresponds to 0 inches precipitation	31
% of Times Flow Measurement corresponds to 0 inches precipitation	81.6%

Enclosure B: comparison of BMP's included in the Bennoc permit with ODNR requirements

The BMP's included in the proposed permit can be found in Part II, Section J "Best Management Practices for Minimizing Discharges of Total Dissolved Solids", and also below in column A. Column B contains a small subset of Ohio's regulations concerning similar practices as they relate to coal mining. As you can see, each of the BMP's presented in the permit include practices already required by ODNR:

BMP included in permit	Similar practice described in Ohio Admin Code, under Ohio DNR's regulations at OAC 1501:13-9-04
1. Before beginning coarse refuse disposal operations, the permittee shall develop a plan for the control of surface water drainage. The permittee shall:	(A) General. Mining shall be planned and conducted to minimize disturbance to the prevailing hydrologic balance in both the permit and adjacent areas, to prevent material damage to the hydrologic balance outside the permit area, to assure the protection or replacement of water rights, and to support approved postmining land uses in accordance with the terms and conditions of the approved permit and the requirements of mining and reclamation rules. The chief may require additional preventive, remedial, or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented. Mining and reclamation practices that minimize water pollution and changes in flow shall be used in preference to water treatment.
a. Disturb the smallest practicable area at any time during coarse refuse fill operations;	(D)(3)(a) Disturbing the smallest practicable area at any one time during the mining operation through progressive backfilling and grading…,
b. Place coarse refuse to avoid runoff of coal refuse-impacted water into locations other than treatment ponds;	(B)(1) All surface drainage from the disturbed area, including disturbed areas that have been graded, seeded, or planted, shall be passed through a sedimentation pond or a series of sedimentation ponds before leaving the permit area until vegetation is established, at which time vegetation of the area may be the best technology currently available, provided that drainage from the area: (a) Meets effluent limitations; and (b) Does not contribute suspended solids to streamflow.
c. In accordance with ODNR approved coal waste plan, stabilize and compact fill material to promote a reduction in the rate and volume of runoff, and to minimize the penetration of precipitation into the fill;	(D)(3)(b) Stabilizing the backfill material to promote a reduction in the rate and volume of runoff, in accordance with the requirements of rule 1501:13-9-14 of the Administrative Code;
d. To the extent practicable, divert runoff away from disturbed areas; and	(D)(3)(d) Diverting runoff away from disturbed areas;
e. Reclaim filled areas as soon as practicable following filling, in accordance with the ODNR approved coal waste plan.	(D)(3)(a) …and prompt revegetation as required in rule 1501:13-9-15 of the Administrative Code.
2. Rills and gullies shall be filled or regarded minimize erosion	(D)(3)(e) Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;
3. Discharge volumes shall be minimized during low-flow conditions in the receiving waters.	(B)(2) Sedimentation ponds and other treatment facilities shall be maintained until the quality of the untreated drainage from the disturbed area meets the applicable state and federal water quality standard requirements.

6

INVOICED

TRA-DET INC.
P.O. BOX 2019
WHEELING, WV 26003-0219
(304) 547-8084
FAX: (304) 547-8097

SHIPPING ADDRESS
2595 BATTLE RUN ROAD
TRIADELPHIA, WV 26059-9309

LABORATORY ANALYSES

American Energy Corporation
Century Mine
43521 Mayhugh Hill Road Twp. Hwy. 88
Beallsville, OH 43716
Attn: Mr. Fred Blumling

26-Jun-09

By: _____
TraDet, Inc.

Company:	American Energy Corporation	Sampled By:	QES (WD)
Plant:	Century Mine	Date & Time Sampled:	06-05-09 0951
Source:	D-0425 Pond 013	Date & Time Received:	06-05-09 1330
Analysis Number:	0906194		

PARAMETER	CONCENTRATION		DATE & TIME ANALYZED	ANALYST	METHOD		PQL	
pH, Field	7.8	S.U.	06-05-09 0951	QES (WD)				
pH, Lab*	7.87	S.U.	06-09-09 0750	TW	4500HB	[2]		
Specific Conductance, Lab	8880	µmhos/cm	06-18-09 1625	LW	120.1	[3]	10.00	µmhos/cm
Total Dissolved Solids	6860	mg/L	06-06-09 1015	MM	2540C	[2]	10	mg/L
Total Suspended Solids	<10	mg/L	06-06-09 1015	MM	2540D	[2]	10	mg/L
Iron	0.2	mg/L	06-11-09-1744	TW	3111B	[1]	0.1	mg/L
Manganese	1.5	mg/L	06-11-09-1744	TW	3111B	[1]	0.02	mg/L

*Analysis surpassed recommended holding time upon arrival
PQL: Practical Quantitation Limit
[1] Standard Methods, 18th Edition [2] Standard Methods, 20th Edition [3] US EPA [4] ASTM [5] EPA SW846

Chain Of Custody Record

Customer Name:	American Energy Corporation - Century Mine		724-255-4691 AEC - Century
Address:	43521 Mayhugh Hill Road Twp. Hwy. 88		740-782-1767 QES
	Beallsville, OH 43716		740-782-1905 QES FAX
Person to Contact:	FRED BLUMLING		304-547-9094 TRADET LAB
Billing Address:	Same		304-547-9097 TRADET FAX
Date of Sample Shipment:	6-5-09	Sampler:	Quality Environmental Services, Inc.
How Shipped:	CAR TO FRED AT MINE, DROP OFF BY LOAD...		(QES)

SAMPLE LOG AND ANALYSIS REQUEST

Lab Use: Lab #	Sample Identification	Containers # and Type	Date	Time	pH / DO	Analysis Requested
[illegible]	D-0025 Pond 02	1-500 mL HDPE UNPRESERVED	6-5	0852	8.6	Monthly
[illegible]	D-0025 Pond 05			0925	8.3	
[illegible]	D-0025 Pond 01			0810	8.5	
[illegible]	D-0025 Pond 03			0951	7.8	
[illegible]	D-0025 Pond 05			1010	8.5	

Relinquished by: (signature)	Date & Time: 6-5-09 1200
Relinquished by: (signature)	Date & Time: 6-5- 1605
Received for laboratory by: (signature)	Date & Time:
Received in laboratory by: (signature)	Date & Time: 6/5 1330

Comments:

Preservative Check

Received On Ice Y / N

Temperature Upon Arrival °C

INVOICED

TRA-DET INC.
P.O. BOX 2019
WHEELING, WV 26003-0219
(304) 547-8094
FAX: (304) 547-8097

SHIPPING ADDRESS
2593 BATTLE RUN ROAD
TRIADELPHIA, WV 26059-9809

LABORATORY ANALYSES

13-Jul-09

American Energy Corporation
Century Mine
43521 Mayhugh Hill Road Twp. Hwy. 88
Beallsville, OH 43716
Attn: Mr. Fred Blumling

By: William Hogan
TraDet, Inc.

Company:	American Energy Corporation	Sampled By:	QES (WD)
Plant:	Century Mine	Date & Time Sampled:	06-25-09 1010
Source:	D-1159 Pond 001	Date & Time Received:	06-26-09 0830
Analysis Number:	0906733		

PARAMETER	CONCENTRATION		DATE & TIME ANALYZED	ANALYST	METHOD		PQL	
pH, Field	8.1	S.U.	06-25-09 1010	QES (WD)				
pH, Lab*	8.24	S.U.	06-29-08 0845	MM	4500HB	[2]		
Specific Conductance, Lab	7480	µmhos/cm	07-01-09 1130	LW	120.1	[3]	10.00	µmhos/cm
Total Dissolved Solids	4780	mg/L	06-27-09 1115	MM	2540C	[2]	10	mg/L
Total Suspended Solids	<10	mg/L	06-27-09 1115	MM	2540D	[2]	10	mg/L
Iron	0.1	mg/L	07-06-09 1400	TW	3111B	[1]	0.1	mg/L
Manganese	0.03	mg/L	07-06-09 1400	TW	3111B	[1]	0.02	mg/L

*Analysis surpassed recommended holding time upon arrival
PQL: Practical Quantitation Limit
[1] Standard Methods, 18th Edition [2] Standard Methods, 20th Edition [3] US EPA [4] ASTM [5] EPA SW846

2 - 6

Chain Of Custody Record

Customer Name:	American Energy Corporation - Century Mine		724-255-4891 AEC - Century
Address:	43521 Mayhugh Hill Road Twp. Hwy. 88		740-782-1767 QES
	Beallsville, OH 43716		740-782-1905 QES FAX
Person to Contact:	FRED BLUMLING		304-547-9094 TRADET LAB
Billing Address:	Same		304-547-9097 TRADET FAX
Date of Sample Shipment:	6-25-09	Sampler:	Quality Environmental Services, Inc. (QES)
How Shipped:	QES TO FRIDGE AT MINE PICKED UP BY LAB		

SAMPLE LOG AND ANALYSIS REQUEST

Lab Use: Lab #	Sample Identification	Containers # and Type	Date	Time	(pH) DO	Analysis Requested
[illegible]	D-1.5 Pond C-1	1-500 mL NP 1-125 mL HNO3	6-25	1010	8.1	MONTHLY
[illegible]	D-1.5 Pond 062	1	1	1130	8.0	MONTHLY

Relinquished by: (signature)	[signature]	Date & Time: 6-25@1155
Relinquished by: (signature)		Date & Time:
Received for laboratory by: (signature)	[signature]	Date & Time: 6-26 @ 1:00
Received in laboratory by: (signature)	[signature]	Date & Time: 6/26 8:2

Comments:

Preservative Check

Received On Ice Y / N

Temperature Upon Arrival °C